

30. An arrangement comprising:

a source providing an alternating voltage across a pair of source terminals; the alternating voltage having a fundamental frequency;

a series-combination of an inductor and a capacitor; the series-combination being: (i) naturally resonant at a frequency lower than said fundamental frequency, (ii) effectively connected across the source terminals, thereby to draw a source current from the source terminals, and (iii) connected in circuit with a pair of output terminals across which is provided a substantially sinusoidal output voltage; the inductor means being coupled with an auxiliary winding, thereby to cause an auxiliary voltage to be provided from this auxiliary winding; the coupling between the inductor and the auxiliary winding being sufficiently loose so that, in case an electrical short circuit were to be placed across the auxiliary winding, the magnitude of the source current would be prevented from increasing to a detrimentally high level; and

a gas discharge lamp means having a first thermionic cathode with a pair of cathode terminals connected with the auxiliary winding by way of a connect means; the lamp means also having a second thermionic cathode; the substantially sinusoidal output voltage being applied between the first and the second thermionic cathodes.

31. An arrangement comprising:

a source providing an alternating voltage across a pair of source terminals; the alternating voltage having a fundamental frequency;

a series-combination of an inductor and a capacitor; the series-combination being: (i) naturally resonant at a frequency lower than said fundamental frequency, (ii) effectively connected across the source terminals, thereby to draw a source current from the source terminals, and (iii) connected in circuit with a pair of output terminals across which is provided a substantially sinusoidal output voltage; the inductor means being coupled with an auxiliary winding, thereby to cause an auxiliary voltage to be provided from this auxiliary winding; the coupling between the inductor and the auxiliary winding being sufficiently loose so that, in case an electrical short circuit were to be placed across the auxiliary winding, the inductance represented by the inductor would not decrease by more than half; and

a gas discharge lamp means having a first thermionic cathode with a pair of cathode terminals connected with the auxiliary winding by way of a connect means; the lamp means also having a second thermionic cathode; the substantially sinusoidal output voltage being applied between the first and the second thermionic cathodes.

32. An arrangement comprising:

a source providing an alternating voltage across a pair of source terminals; the alternating voltage having a fundamental frequency;

a series-combination of an inductor and a capacitor; the series-combination being: (i) naturally resonant at a frequency lower than said fundamental frequency, (ii) effectively connected across the source terminals, thereby to draw a source current from the source terminals, and (iii) connected in circuit with a pair of output terminals across which is provided a substantially sinusoidal output voltage; the inductor means being coupled with an auxiliary winding, thereby to cause an auxiliary voltage to be provided from this auxiliary winding; and

a gas discharge lamp means having a first thermionic cathode with a pair of cathode terminals connected with the auxiliary winding by way of a connect means; the lamp means also having a second thermionic cathode; the substantially sinusoidal output voltage being applied between the first and the second thermionic cathodes; the connect means being characterized by including a resistor means.

33. The arrangement of claim 32 wherein the resistor means is a non-linear resistor means.

34. The arrangement of claim 32 wherein the resistor means includes an incandescent filament means.

35. An arrangement comprising:

a source providing an alternating voltage across a pair of source terminals; the alternating voltage having a fundamental frequency;

a series-combination of an inductor and a capacitor; the series-combination being: (i) naturally resonant at a frequency lower than said fundamental frequency, (ii) effectively connected across the source terminals, thereby to draw a source current from the source terminals, and (iii) connected in circuit with

a pair of output terminals across which is provided a substantially sinusoidal output voltage; the inductor means being coupled with an auxiliary winding, thereby to cause an auxiliary voltage to be provided from this auxiliary winding; and

a gas discharge lamp means having a first thermionic cathode with a pair of cathode terminals connected with the auxiliary winding by way of a connect means; the lamp means also having a second thermionic cathode; the substantially sinusoidal output voltage being applied between the first and the second thermionic cathodes; the connect means including limiting means operative to manifestly limit to a pre-established level the magnitude of any current drawn from the auxiliary winding.